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29. Introduction – Bill Of Materials

The Bill of Materials software package was designed for the manufacturing or remanufacturing of parts, engines, or any item that consists of component parts that need to be tracked and computed for the purposes of assembly. Through Bill of Materials, inventory will be automatically updated when a work order is finalized. A master part number will consist of all component parts that are needed to create the master part. Each component part, which makes up the master part, is stored with the quantity required to assemble the finished master part. Bill of Materials allows the user to create, edit, finalize, print, or delete work orders. The generated work order consists of a creation date and a date when the order is to be completed. As an option, the user can also print out the computed price of the master part. This is decided on 6 different price levels. Once the selling prices for the finished part is determined, the master part can be sold in point of sale as a one line, one price item.

With all the features described above, Bill of Materials is incredibly easy to use. There are help screens available throughout every function to also assist the user.

29.1 Accessing Bill Of Materials

- With the cursor positioned at the login prompt, enter **bom** and press **<Return>**.

  If the following message is displayed:

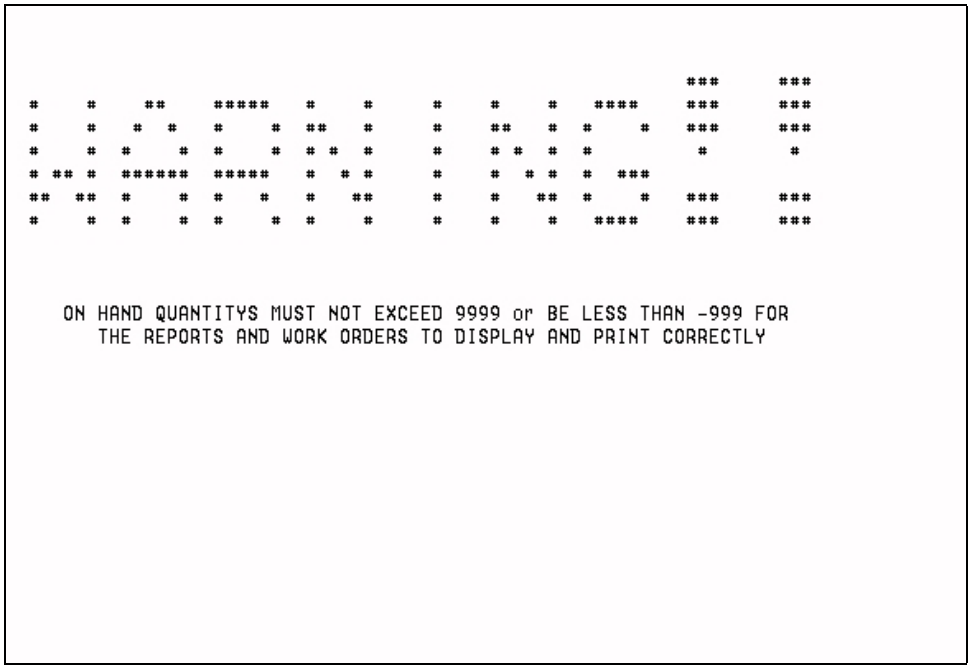
```
BILL OF MATERIALS IS ALREADY RUNNING IN THIS STORE

ONLY ONE PERSON MAY USE BOM AT A TIME IN THIS STORE

       PLEASE TRY AGAIN LATER
```

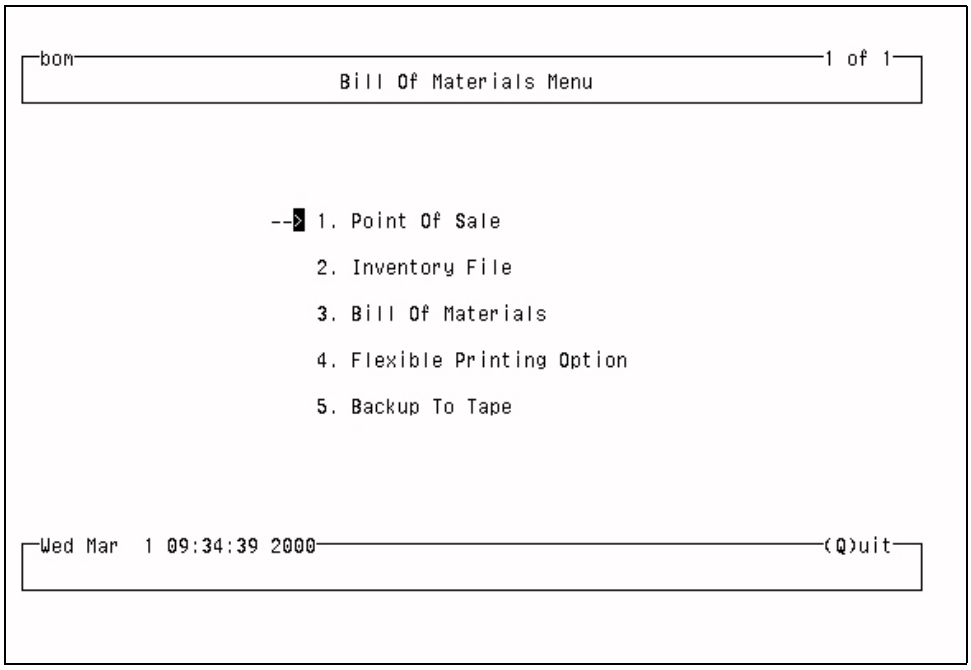
☞ **This message gets displayed when another user is currently using the Bill of Materials program. Bill of Materials is a single-user program and only one user may use the Bill of Materials program at a time in each store!**

If no other users are currently using the Bill of Materials program, the following warning message will be displayed:



This is a warning message which explains that all parts cannot have quantities greater than 9999 or less than -999 in order for reports and work orders to display and print correctly!

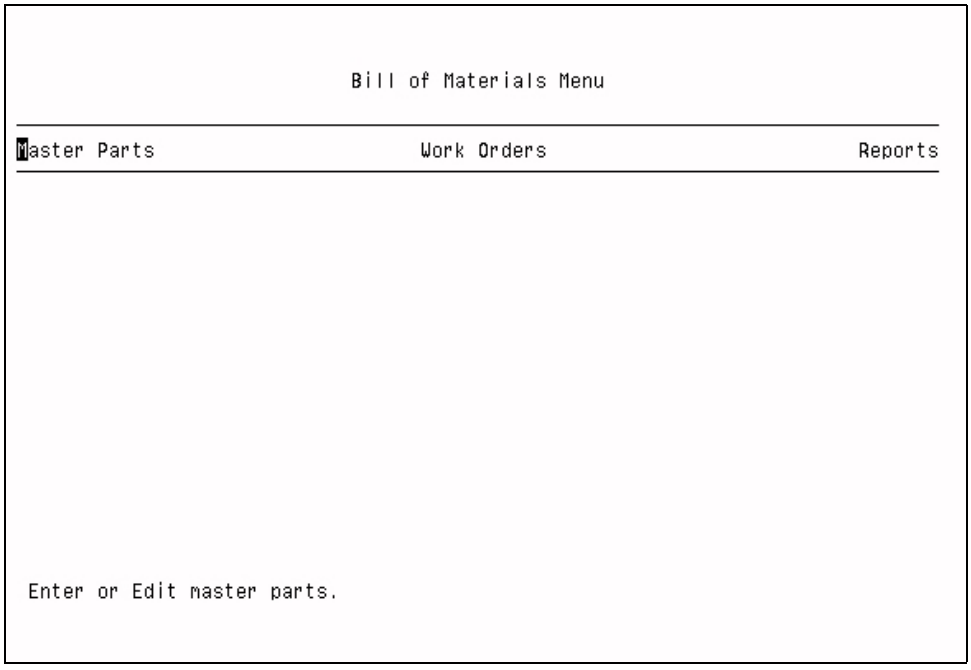
The *Bill of Materials Menu* will be displayed as shown:



This menu can be used to access point of sale, inventory file, bill of materials, flexible printing option and backup to tape programs.

- To access the Bill of Materials program, enter **3** *(Bill Of Materials)*.

  The *Bill of Materials Menu* will be displayed as shown:



This menu is the starting point for all the functions within Bill of Materials. Each function is described in further detail in the following sections.

29.2 Building Master Parts

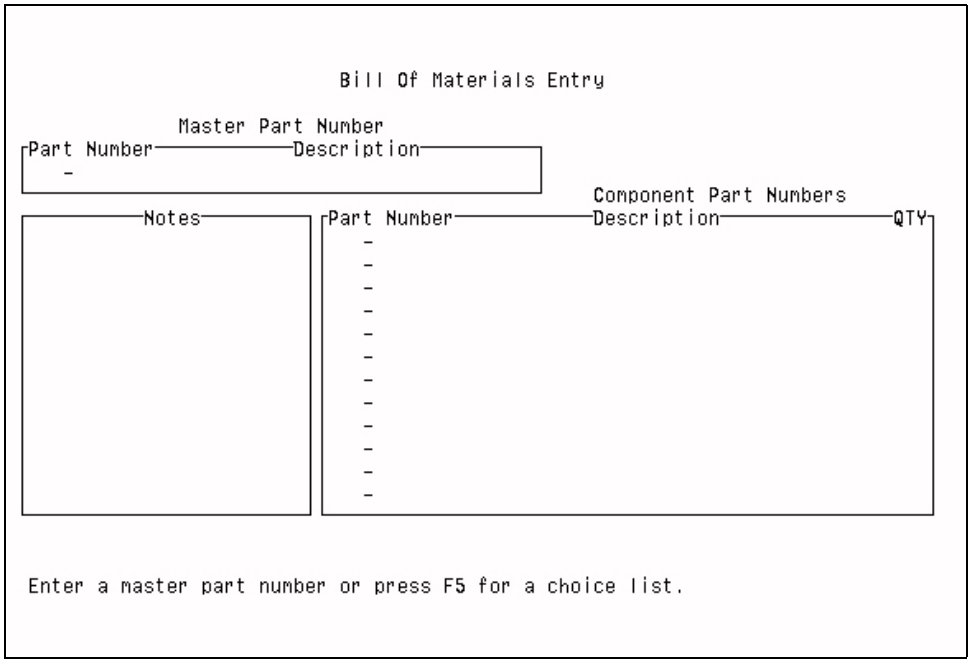
- To start building master parts, position the cursor on the **Master Parts** field using the arrow keys and press **<Return>** or just press the letter **M**.

☞ **Hint: Pressing the first letter of the menu is the quickest way to access any of the options on the menu.**

Pressing the ↑ or ← arrow keys will move the cursor backwards from field to field. The ↓ or → arrow keys move the cursor forward from field to field.

Help screens are available throughout each section by simply pressing the **<F8>** key. When the **<F8>** key is pressed, a small text help window will pop up in the lower portion of the screen. Use the ↑ and ↓ arrow keys to scroll through the help text. Pressing the letter **z** will zoom the help window to a full screen. Pressing **z** again, will shrink the help window back to its original size. Press **<Return>** or **<F11>** to exit the help window and continue.

The *Bill of Materials Entry* screen will be displayed as follows:



- With the cursor positioned under the **Part Number** field within the *Master Part Number* section, enter a master part number and press **<Return>**.

The cursor will now be positioned under the **Part Number** field within the *Component Part Number* section. A component part is a single part that is required to assemble a master part. In this field the user can add, delete, change or insert a new component part.

- Enter a component part number that is required to build the master number and press **<Return>**.
- With the cursor now positioned under the **QTY** field, enter the quantity required to build the master number and press **<Return>**.

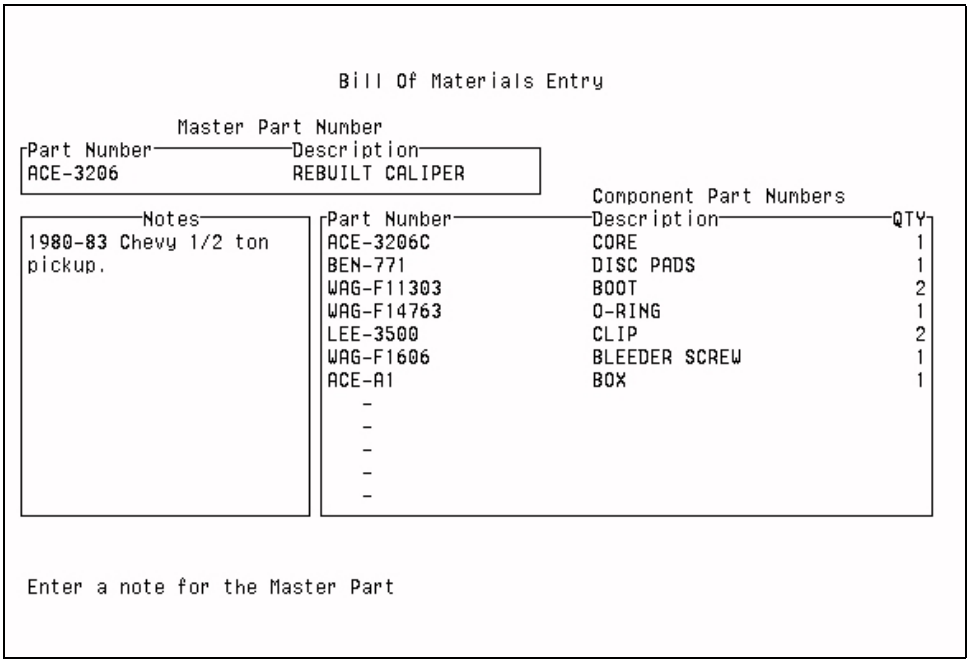
  The cursor will again be positioned under the **Part Number** field within the *Component Part Number* section. Continue entering component parts until all parts and quantities have been entered.

29.2.1 Entering Notes Information

The *Notes* section of the screen allows the user to enter any type of meaningful notes information for this master part.

- To enter notes information, press the **<F7>** key and the cursor will now be positioned within the *Notes* section of the screen.

  Enter the note information and when entering a note, do not press **<Return>** at the end of a line. Simply press the **<space bar>** 1-2 times and continue entering notes. When finished entering the notes information, press the **<F7>** key to return to entering component parts.



29.2.2 Saving The Entered Master Part

- Once all component parts and notes have been entered, press the **<F10>** key to save the form information.

The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.

- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.3 Editing Master Parts

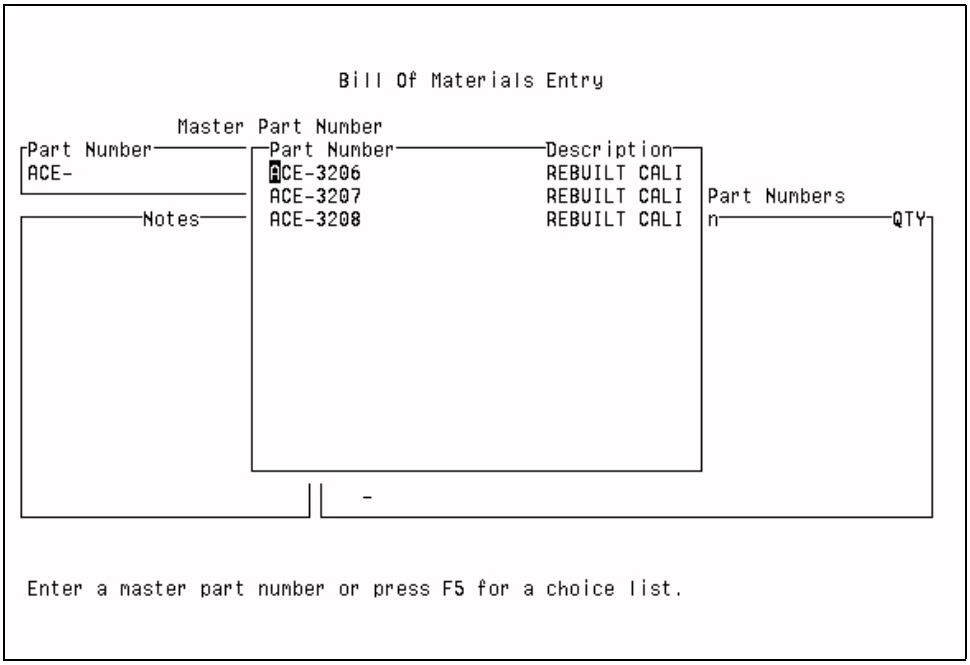
- To edit a master part, position the cursor on the **Master Parts** field using the arrow keys and press **<Return>** or just press the letter **M**.
- With the cursor positioned under the **Part Number** field within the *Master Part Number* section, enter the master part number and press **<Return>** or press the **<F5>** key to select from a sorted choice list of all current master parts in the database.

29.3.1 Selecting Master Parts From A Choice List

- To limit the search choice list, enter the first few characters of the part number and then press the **<F5>** key.

  Example:

  Entering **ACE-** will display all master numbers with the **ACE-** manufacturer code only. A choice list window will now pop up in the middle of the screen as shown:



- With the cursor now positioned on the first part in the choice list under the **Part Number** field within the pop up choice list, select the desired part by moving the cursor using the ↑ or ↓ arrow keys or by pressing the first letter of the part number.

Pressing the first letter of the part number multiple times will cycle through all parts beginning with that letter.

Pressing the **<F11>** key will remove the choice list window without selecting a part.

- With the cursor positioned on the master part to be edited, press the **<Return>** key twice.

  The screen will now display the component and notes information for the selected part and the cursor will now be positioned under the **Part Number** field within the *Component Part Number* section. Within this field the user has the ability to add, delete, or change a component part.

29.3.2 Adding A Component Part

- With the cursor positioned under the **Part Number** field within the *Component Part Number* section, press the **<F2>** key and a new line will be inserted at the current cursor position and push all existing component parts down.
- Enter the new component part number and press **<Return>**.
- With the cursor now positioned under the **QTY** field, enter the quantity required to build the master number and press **<Return>**.
- Press the **<F10>** key to save the form information.

  The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.
- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.3.3 Deleting A Component Part

- With the cursor positioned under the **Part Number** field within the *Component Part Number* section, use the arrow keys to position the cursor on the line of the component part to be deleted.
- Press the **<F4>** key and the line will be deleted and reposition all existing component parts accordingly.
- Press the **<F10>** key to save the form information.

  The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.
- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.3.4 Changing A Component Part

- With the cursor positioned under the **Part Number** field within the *Component Part Number* section, use the arrow keys to position the cursor on the line of the component part to be changed.

- Enter the new component part number to change it to and press **<Return>**.
- With the cursor now positioned under the **QTY** field, enter the new quantity required to build the master number and press **<Return>**.
- Press the **<F10>** key to save the form information.

  The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.
- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.4 Editing Notes

- To edit a note within a master part, position the cursor on the **Master Parts** field using the arrow keys and press **<Return>** or just press the letter **M**.
- With the cursor positioned under the **Part Number** field within the *Master Part Number* section, enter the master part number and press **<Return>** or press the **<F5>** key to select from a sorted choice list of all current master parts in the database.

  The screen will now display the information for the selected master part and the cursor will now be positioned under the **Part Number** field within the *Component Part Number* section.
- Press the **<F7>** key and the cursor will now be positioned within the *Notes* section of the screen.
- The user has the ability to insert blank lines within an existing note, reflow the existing notes, and/or delete lines of existing notes.

  The *Notes* section of the screen allows the user to enter any type of meaningful notes information for this master part.
- Enter the note information and when entering a note, do not press **<Return>** at the end of a line. Simply press the **<space bar>** 1-2 times and continue entering notes. When finished entering the notes information, press the **<F7>** key to return to entering component parts.

29.4.1 Inserting Notes Information

- With the cursor positioned under the **Part Number** field within the *Master Part Number* section, press the **<F7>** key and the cursor will now be positioned on the first line of notes information.
- Press the **<F2>** key and a blank line will be inserted at the current cursor position and push all existing notes information down.
- Enter the new notes information and when finished press the **<F10>** key to save the form information.

The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.

- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.4.2 Deleting Notes Information

- With the cursor positioned under the **Part Number** field within the *Master Part Number* section, press the **<F7>** key and the cursor will now be positioned on the first line of notes information.

29.4.2.1 Deleting A Complete Line Of Notes Information

- With the cursor positioned on the first line of notes information, use the arrow keys to position the cursor on the line that is to be deleted and press the **<F4>** key. The line will be deleted and all notes information will be repositioned accordingly.

29.4.2.2 Deleting A Word Within The Notes Information

- With the cursor positioned on the first line of notes information, use the arrow keys to position the cursor one position past the word that is to be deleted and press the **<Back Space>** key. Each time the **<Back Space>** key is pressed, the character to the left will be deleted.
- Press the **<F10>** key to save the form information.

  The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.
- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.4.3 Reflowing Notes Information

- With the cursor positioned under the **Part Number** field within the *Master Part Number* section, press the **<F7>** key and the cursor will now be positioned on the first line of notes information.
- Press the **<F3>** key and notes information will be reflowed (position as much text on each line as possible).
- Press the **<F10>** key to save the form information.

  The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.
- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.4.4 Splitting Notes Line Information

- With the cursor positioned under the **Part Number** field within the *Master Part Number* section, press the **<F7>** key and the cursor will now be positioned on the first line of notes information.
- Using the arrow keys, position the cursor one position past the word where the line will be split and press the **<Return>** key.

  All information after the cursor will be repositioned on the next line.
- Press the **<F10>** key to save the form information.

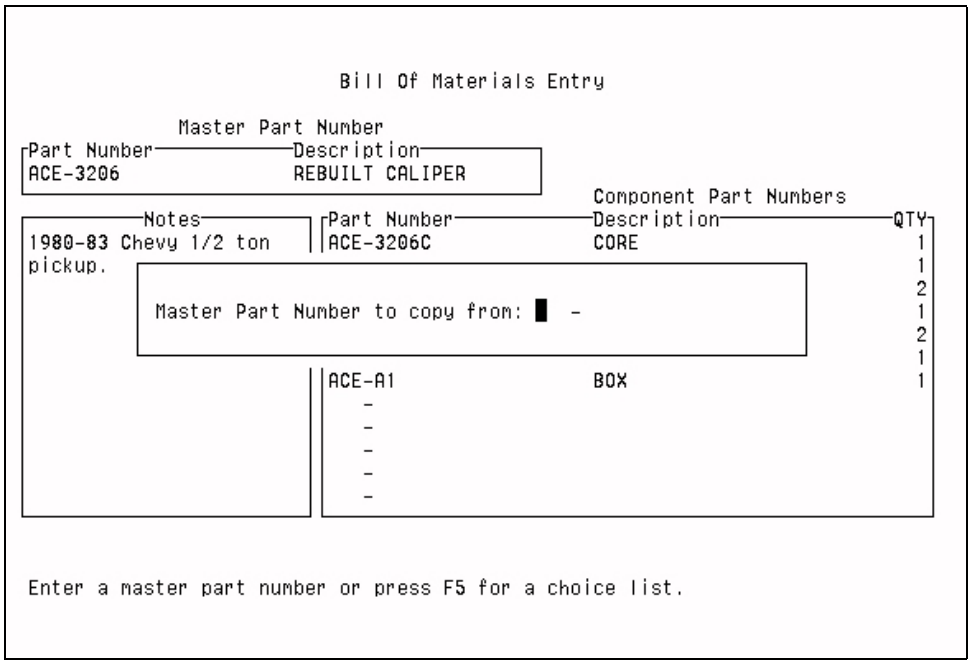
  The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.
- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.5 Copying Component Parts

- To copy component parts from a master part into another master part, position the cursor on the **Master Parts** field using the arrow keys and press **<Return>** or just press the letter **M**.
- With the cursor positioned under the **Part Number** field within the *Master Part Number* section, enter the master part number and press **<Return>** or press the **<F5>** key to select from a sorted choice list of all current master parts in the database.

  The screen will now display the information for the selected master part and the cursor will now be positioned under the **Part Number** field within the *Component Part Number* section.

- Press the **<F5>** key and a window will now pop up as shown:



- With the cursor positioned at the **Master Part Number to copy from:** prompt, enter a master part number (to be copied from) and press **<Return>** or press the **<F5>** key for a choice list to choose from. All the component parts from the master part just selected will be copied into the current master part number!

☞ **Note: This function will only append parts to the current component part list and will not insert or overwrite the current list of component parts. If there isn't notes information for the current master part, then the notes information from the master part copied from will be entered in the current master parts' note field.**

- Edit the component parts list accordingly and press the **<F10>** key to save the form information.

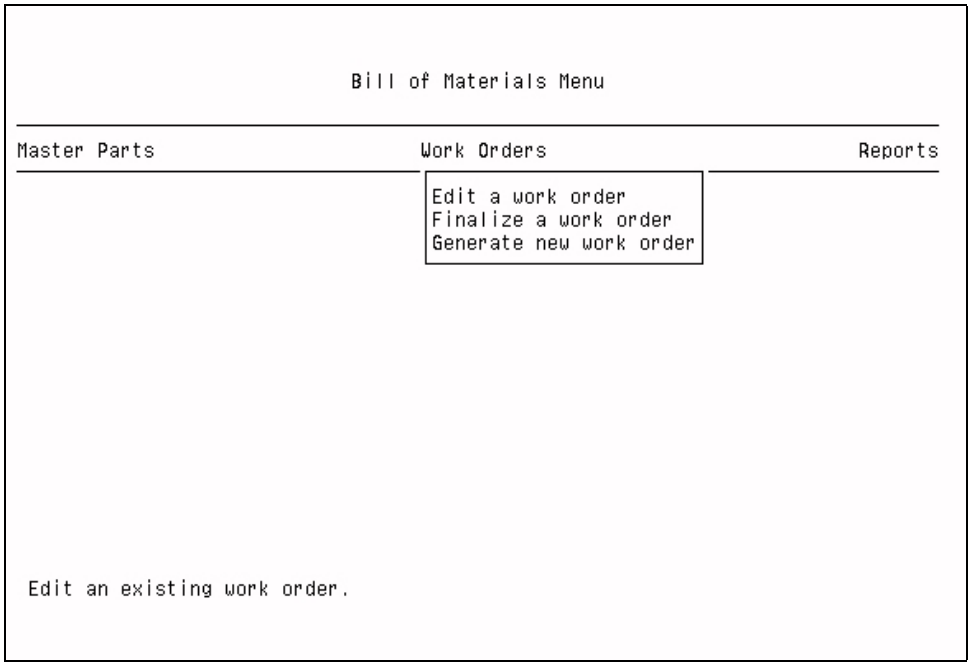
  The screen will clear and the cursor will again be positioned under the **Part Number** field within the *Master Part Number* section.

- Pressing the **<F11>** key will exit back to the *Bill of Materials Menu*.

29.6 Generating A Work Order

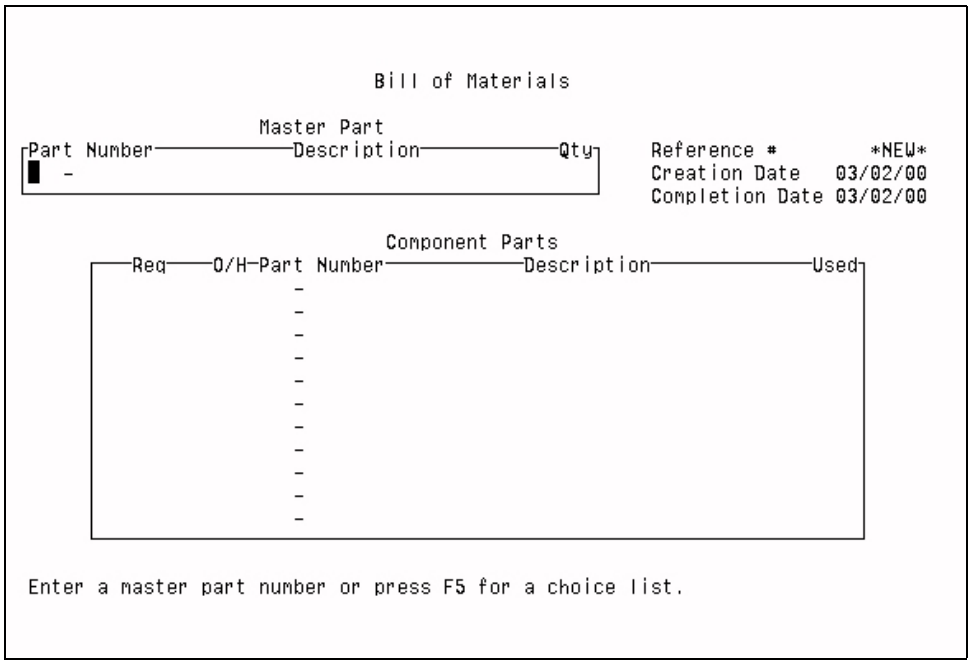
- To start generating work orders, position the cursor on the **Work Orders** field using the arrow keys and press **<Return>** or just press the letter **W**.

A choice list window will pop up prompting to either edit a work order, finalize a work order, or generate a new work order as shown:



- With the cursor now positioned on the first selection in the choice list, select the **`Generate new work order`** option by moving the cursor using the ↑ or ↓ arrow keys and pressing **`<Return>`** or by pressing the first letter of the option.

The following screen will now be displayed:



- With the cursor positioned under the **`Part Number`** field within the *Master Part Number* section, enter the master part number and press **<Return>** or press the **<F5>** key to select from a sorted choice list of all current master parts in the database.
- With the cursor now positioned under the **`QTY`** field, enter the quantity required to build the master number and press **<Return>**.

  A list of component parts will now be displayed within the *Component Parts* section. Each component part number listed will show the calculated quantity required (**`Req`**), quantity on hand (**`O/H`**), component part description (**`Description`**), and quantity used (**`Used`**).
- With the cursor positioned under the **`Part Number`** field within the *Component Parts* section, enter the proposed completion date of the work order by pressing the **<F6>** key.
- With the cursor now positioned next to the **`Completion Date`** field, enter the proposed completion date in the form of MMDDYY (MM(month)DD(day)YY(year) and press **<Return>**.

☞ **Note: If the current date ever surpasses the proposed completion date, any changes to the work order will enter the current date into the `Completion Date` field.**

- Press the **<F10>** key to generate a reference number and save the generated work order.

The quantity on hand of the component parts will be reduced by the quantity used in each component part.

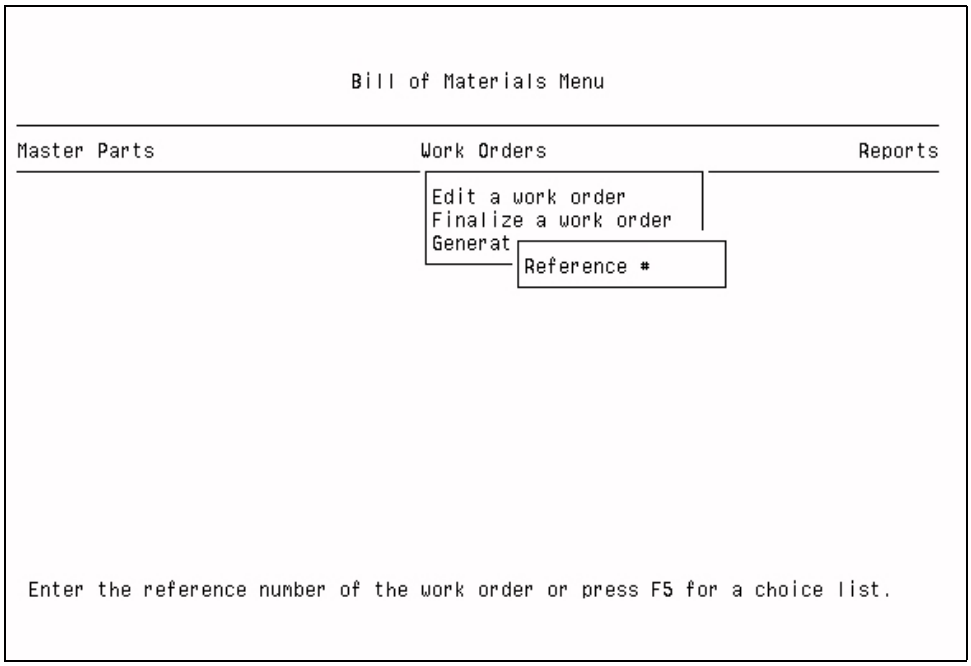
29.7 Editing A Work Order

- To edit an existing work order, position the cursor on the **`Work Orders`** field using the arrow keys and press **<Return>** or just press the letter **`W`**.

  A choice list window will pop up prompting to edit a work order, finalize a work order, or generate a new work order.

- With the cursor now positioned on the first selection in the choice list, select the **`Edit a work order`** option by moving the cursor using the ↑ and ↓ arrow keys and pressing **<Return>** or by pressing the first letter of the option.

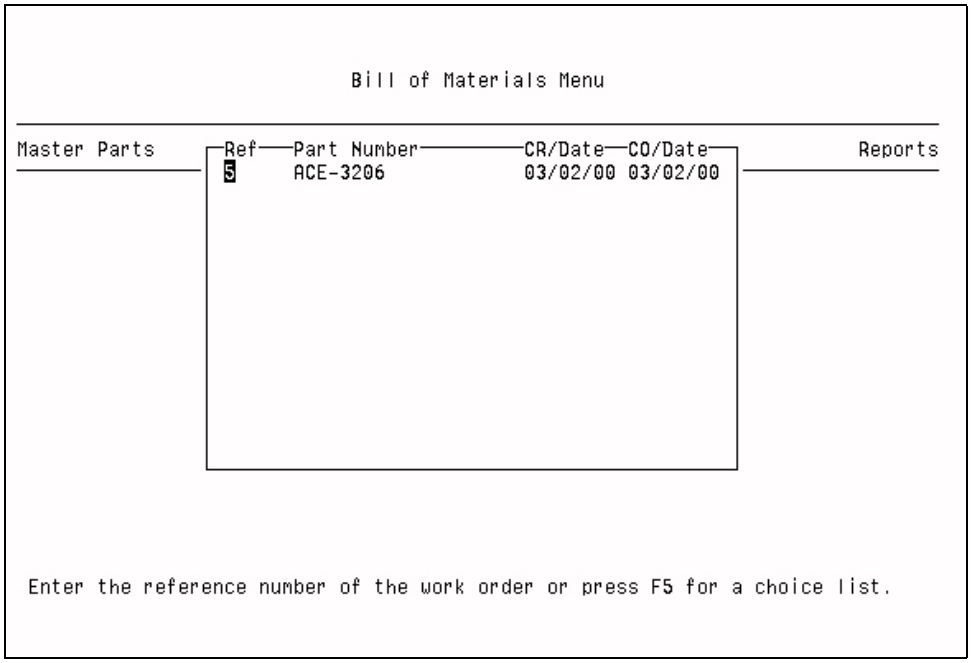
  A window will pop up prompting for the reference number of the work order as shown:



- With the cursor positioned after the **`Reference #`** field, enter the reference number and press **<Return>** or press the **<F5>** key to select from a sorted choice list of all current work orders in the database.

29.7.1 Selecting A Work Order From A Choice List

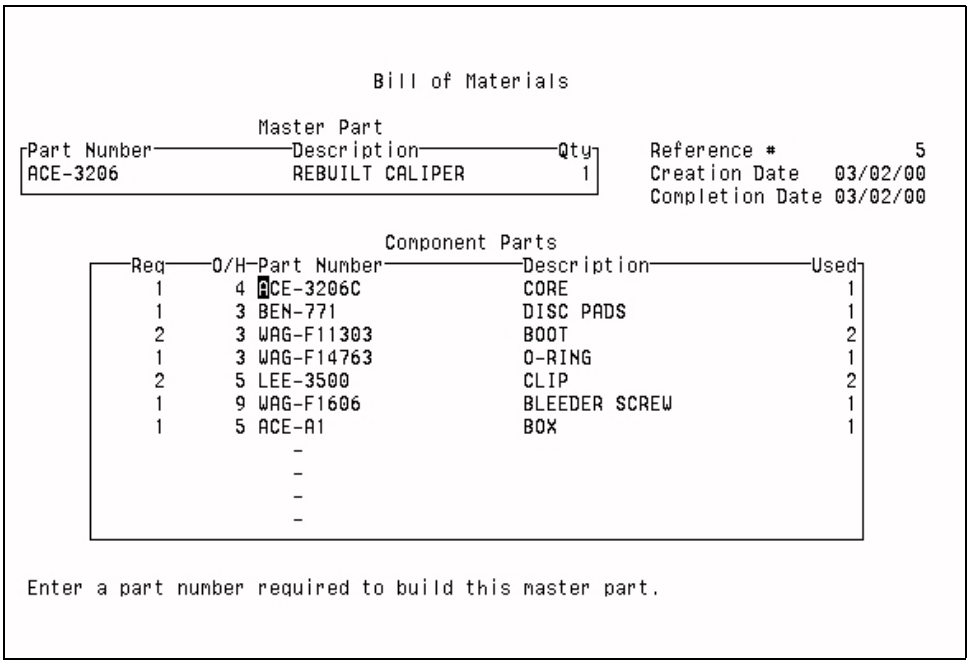
A choice list window will now pop up in the middle of the screen as shown:



The choice list will display reference numbers (**Ref**), master parts (**Part Number**), creation dates (**CR/Date**), and proposed completion dates (**CO/Date**).

- With the cursor positioned on the first reference number within the pop up choice list, use the ↑ and ↓ arrow keys to position the cursor on the desired reference number and press **<Return>** twice.

The screen will now display the information for the selected work order and the cursor will now be positioned under the **`Part Number`** field within the *Component Parts* section as shown:



The user has the ability to add or delete a component part and also change the quantity used for a component part. Changes cannot be made to the component part number. If the user attempts to edit the part number, a *This is a protected field - no edit privileges* message will be displayed.

29.7.2 Adding A Component Part To A Work Order

- With the cursor positioned under the **`Part Number`** field within the *Component Parts* section, press the **`<F2>`** key and a new line will be inserted at the current cursor position and push all existing component parts down.
- Enter the new component part number and press **`<Return>`**.
- With the cursor now positioned under the quantity used (**`USED`**) field, enter the quantity used to build the master number and press **`<Return>`**.
- Press the **`<F10>`** key to save the changed work order information.

29.7.3 Deleting A Component Part From A Work Order

- With the cursor positioned under the **`Part Number`** field within the *Component Parts* section, position the cursor on the line of the component part to be deleted.
- Press the **`<F4>`** key and the line will be deleted and reposition all existing component parts accordingly.

- Press the **<F10>** key to save the changed work order information.

29.7.4 Changing The Quantity Used Of A Component Part On A Work Order

- With the cursor positioned under the **Part Number** field within the *Component Parts* section, position the cursor on the line of the component part to be changed and press **<Return>**.
- With the cursor now positioned under the quantity used (**USED**) field, enter the new used quantity of the component part and press **<Return>**.
- Press the **<F10>** key to save the changed work order information and adjust the quantity on hand of the component part changed.

29.7.5 Changing The Completion Date Of A Work Order

- With the cursor positioned under the **Part Number** field within the *Component Parts* section, press the **<F6>** key.
- With the cursor now positioned next to the **Completion Date** field, enter the new completion date in the form of MMDDYY (MM(month)DD(day)YY(year) and press **<Return>**.

☞ **Note: If the current date ever surpasses the proposed completion date, any changes to the work order will enter the current date into the Completion Date field.**

- Press the **<F10>** key to save the changed work order information.

29.7.6 Changing The Quantity To Build On A Work Order

- With the cursor positioned under the **Part Number** field within the *Component Parts* section, press the **<F7>** key.
- With the cursor now positioned under the **Qty** field, enter the new quantity to build of the master part and press **<Return>**.

  The required quantities of the component parts will change to reflect the new build quantity, but the quantities used will *not* be updated.

  The user will have to adjust the quantities used manually.
- Press the **<F10>** key to save the changed work order information.

29.7.7 Printing The Current Work Order

- With the cursor positioned under the **Part Number** field within the *Component Parts* section, press the **<F9>** key.

  The work order will be printed on the printer that is setup in the *Flexible Printing* option through the *Miscellaneous Functions Menu*.

If the printed work order is new and has not been saved yet, **NEW** will be printed as the reference number.

The report will print all the information on the screen plus columned *Computed Price* and *Actual Price* information for price levels 0 through 5. Computed prices are computed by multiplying the quantity used units by the prices in each of the price levels of the component parts. Actual prices are the prices that are stored in the master part number record within the inventory file, multiplied by the build quantity.

29.7.8 Sample Work Order Report

```
                          Bill of Materials                    Page 1



                                                    Reference: 212
                                                Creation Date: MM/DD/YY
                                              Completion Date: MM/DD/YY

   Master Part            Description         Build Qty
   ACE-3206               REBUILT CALIPER             4

   Component Parts        Description              Used
 1. ACE-3206C             CORE                        4
 2. BEN-771               DISC PADS                   4
 3. WAG-F11303            BOOT                        8
 4. WAG-F14763            O-RING                      4
 5. LEE-3500              CLIP                        8
 6. WAG-F1606             BLEEDER SCREW               4
 7. ACE-A1                BOX                         4

         Computed Price        Actual Price
Price 0           83.45              145.00
Price 1          104.40              181.25
Price 2          108.50              188.50
Price 3          112.75              195.75
Price 4          116.75              203.00
Price 5          125.25              217.50
```

Sample Workorder Report

29.8 Finalizing A Work Order

- To finalize an existing work order, position the cursor on the **`Work Orders`** field using the arrow keys and press **`<Return>`** or just press the letter **`W`**.

  A choice list window will pop up prompting to edit a work order, finalize a work order or generate a new work order.

- With the cursor now positioned on the first selection in the choice list, select the **`Finalize a work order`** option by moving the cursor using the ↑ and ↓ arrow keys and pressing **`<Return>`** or by pressing the first letter of the option.

  A window will pop up prompting for the reference number of the work order.

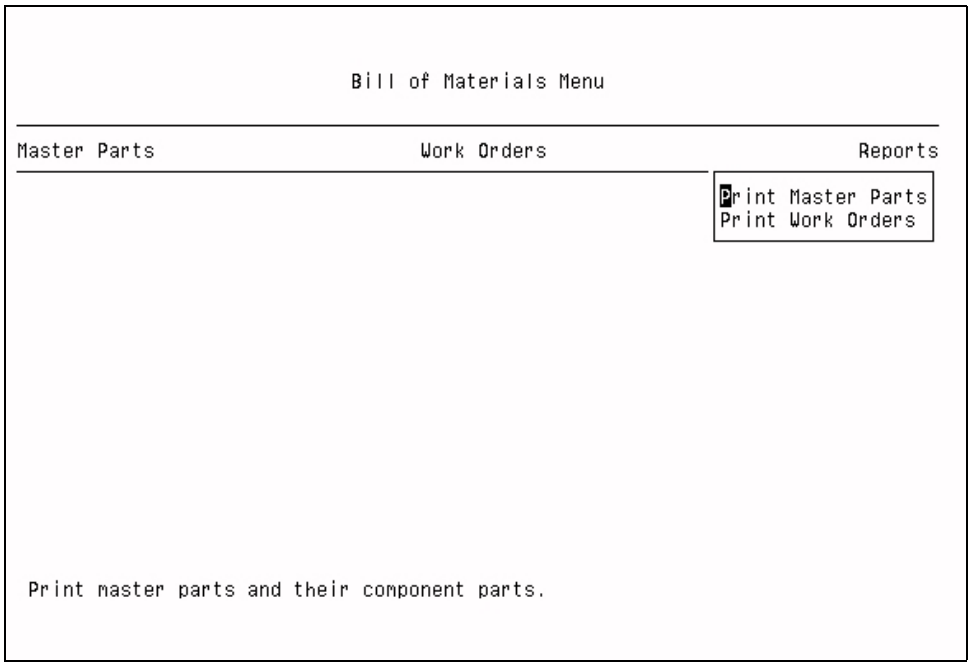
- With the cursor positioned after the **`Reference #`** field, enter the reference number and press **`<Return>`** or press the **`<F5>`** key to select from a sorted choice list of all current work orders in the database.

  The build quantity of the selected work order will be added to the current quantity on hand of the master part number within the Inventory file.

29.9 Printing Master Parts Or Work Orders

- To print master parts or work order, position the cursor on the **`Reports`** field using the arrow keys and press **`<Return>`** or just press the letter **`R`**.

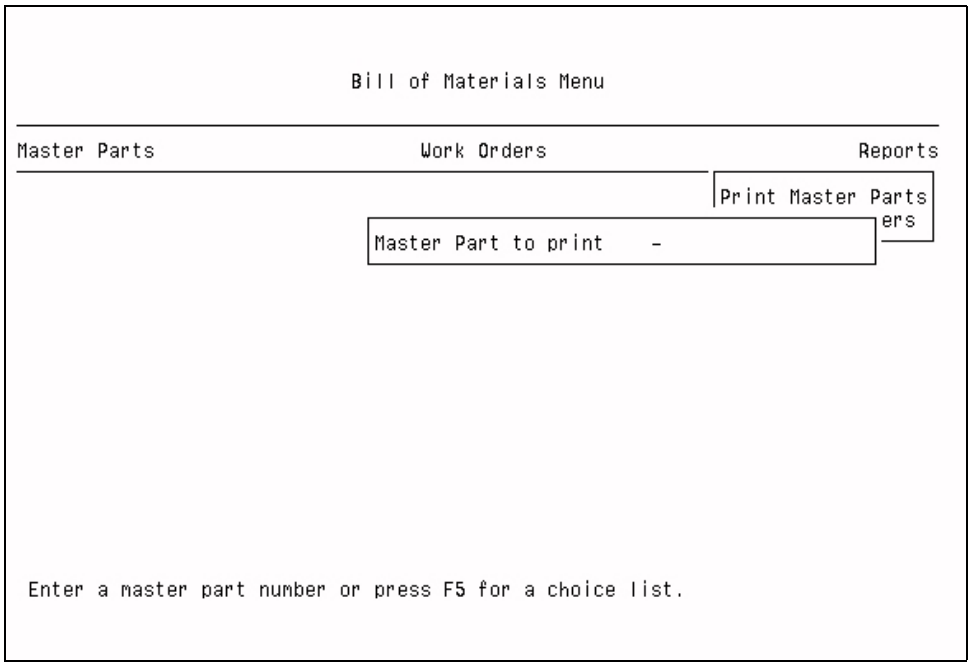
  A choice list window will pop up prompting to print master parts or print work orders as shown:



29.9.1 Printing Master Parts

- With the cursor now positioned on the first selection in the choice list, select the **`Print Master Parts`** option by moving the cursor using the ↑ and ↓ arrow keys and pressing **`<Return>`** or by pressing the letter **`M`**.

A window will pop up prompting for the master part to print as shown:



- With the cursor positioned at the **`Master Part to print`** prompt, enter a master part number and press **<Return>** or press the **<F5>** key for a choice list.

  The master part report will be printed on the printer that is setup in the *Flexible Printing* option through the *Miscellaneous Functions Menu*.

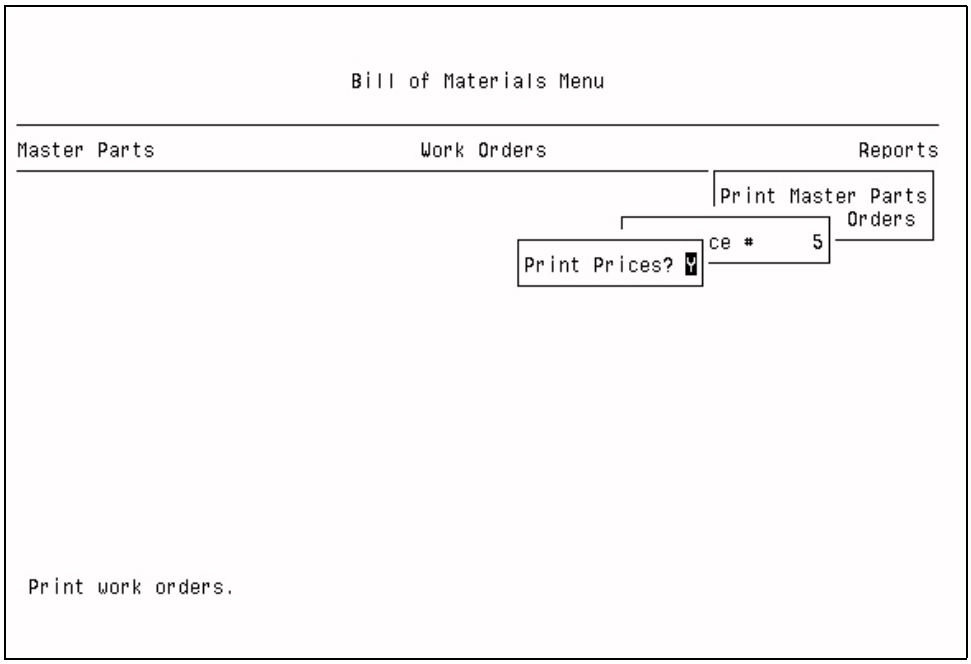
29.9.2 Printing Work Orders

- With the cursor now positioned on the first selection in the choice list, select the **`Print Work Orders`** option by moving the cursor using the ↑ and ↓ arrow keys and pressing **<Return>** or by pressing the letter **W**.

  A window will pop up prompting for the reference number of the work order.

- With the cursor positioned after the **`Reference #`** field, enter the reference number and press **<Return>** or press the **<F5>** key to select from a sorted choice list of all current work orders in the database.

A window will pop up prompting whether or not to print prices as shown:



- With the cursor positioned at the **`Print Prices?`** prompt, enter **`Y`** or **`N`** and the work order will be printed on the printer that is setup in the *Flexible Printing* option through the *Miscellaneous Functions Menu*.